

REMARKS

Reconsideration of the present application is respectfully requested.

The ABSTRACT has been objected to due to informalities noted by the Examiner. In response, Applicant has amended the ABSTRACT in view of the Examiner's noted informalities, and therefore requests that the Examiner's objection be withdrawn.

Claims 1, 3-19 and 21-40 have been rejected under 35 U.S.C. §103 as being unpatentable over Friederich (USP 6,393,149) in view of Lei (USP 6,272,180). This rejection is respectfully traversed.

Initially, Applicant would like to point out that the Examiner has rejected all pending claims in view of both Friedrich and Lei. However, the Examiner has only applied Lei to claim 1 in his reasons for rejection. The Examiner has apparently rejected other claims, such as, for example, claim 6 (Office Action, middle page 6), claim 13 (Office Action, middle page 8), and claim 16 (Office Action, bottom page 9) based on the combination of Friedrich and that which is known in the art. Is the rejection of all claims except for claim 1 therefore based only on Friedrich and that which is known in the art? Applicant respectfully requests that the Examiner clarify which references are applicable to which claims (if assuming *arguendo* the Examiner again rejects one or more of the claims) and that the Examiner cite a reference, pursuant to MPEP §2144.03 (8th Ed., Aug. 2001), as support for his assertion that certain aspects of the invention are known in the art.

Amended claim 1 recites a database managing apparatus having an attribution record group forming means for classifying data, which is requested to be stored in a database, according to attributions defined in the database. Therefore, when a search request for searching the database is received, a data decompressing means has only to decompress a particular

attribution record group that is to be searched, and does not need to decompress other attribution record groups different from the particular attribution record group. As a result, during searching, the database managing apparatus eliminates the need to decompress record data belonging to attributions other than the attribution to be searched. It can therefore quickly retrieve the requested record (page 3, lines 8-19).

Further, amended claim 1 recites that a data compressing means compresses a particular attribution record group that is to be searched with a first compression method, and compresses the other attribution record groups with a second compression method. The first compression method compresses the attribution record group so that the attribution record group after being compressed can be decompressed faster than that compressed by using the second compression method. The second compression method compresses the attribution record group so that a compression rate is higher than that of the first compression method. According to the database managing apparatus, the particular attribution record group can be decompressed fast for searching. Thus, for example, the other attribution record corresponding to the searching result can only be decompressed. Therefore, since a decompression speed of the particular attribution record group is fast and a data compression rate is high, the database managing apparatus can perform high-speed searching and prevent the total amount of compressed data from increasing (e.g., page 19, lines 15-19).

Amended claim 3 recites that a data decompressing means decompresses a particular attribution record group to be searched when a search request for searching a database file is received, and a searching means searches a target record containing a search key in the particular attribution record group. The data decompressing means further decompresses the other attribution record groups when the searching means finds the target record. Therefore, the database managing apparatus can search the target record at first, and can then decompress the

other attribution records according to search results. Accordingly, total processing time for searching can be reduced.

Independent claim 6 recites that the data compressing means compresses only attribution record groups other than a group to be searched. That is, the data compressing means does not compress the particular attribution record group to be searched intentionally so that the database managing apparatus can use data of the particular attribution record group for searching without waiting for the data decompression process. As a result, the database managing apparatus can search the target record as soon as possible and can therefore reduce total processing time for searching (page 13, line 12 to page 14, line 3).

Friederich discloses a data compression system used for a navigation application program. However, Friederich fails to teach or suggest an attribution record group forming means for classifying data according to attributions defined in the database, and use of data classified by the attribution record group forming means as in claims 1 and 3. While Friederich describes different types of data compression/decompression techniques, these techniques effectively compress/decompress data by detecting frequently used data through practical use of conditions in which data, such as road data, is always located adjacent to other road data. Put another way , Friederich merely describes techniques for compressing/decompressing data with respect to a data stream (continuous body of data).

Further regarding claims 1 and 3, the apparatus of the present invention forms a database file by compressing each of the attribution record groups and by combining each attribution record group when a record storing request is made based on the formation of each attribution record group and the classification of each attribution record group into an attribution. Friederich neither teaches nor suggests classification of attribution record groups into respective attributions during record storage requests. For example, assuming that a database is a table in which one

line is one record, in Friederich, data is compressed for each line or as continuous lines (See bottom of col. 19 – top of col. 20 of Friederich). However, in the present application, each line of data is initially compressed, and then the database is structured based on the record data group that was compressed for each line. Friederich and the present invention are completely different with respect to this feature.

Friederich also fails to teach or suggest a data compressing means for compressing only attribution record groups within a particular attribution other than an attribution record group to be searched within the attribution as recited in claim 6. Therefore, the data compression system disclosed by Friederich cannot perform searching at high speeds and cannot prevent the total amount of compressed data from increasing.

The Examiner string cites numerous portions of Friederich as being applicable to claim 6. However, Applicant respectfully requests that the Examiner point to the specific portion of Friederich that the Examiner believes supports his assertions in the Office Action, as Applicant has not been able to find any such support.

The Examiner has cited Lei to cure the deficiencies of Friederich with respect to claim 1. Specifically, the Examiner relies on Lei as teaching the use of more than one compression method and "...decompressed faster and higher compression rate (sic)." However, the Examiner should note that col. 10, lines 56-67 of the Lei patent does not disclose use of more than one data compression method as recited in claim 1. Rather, it references a performance comparison of two separate data compression methods (one being the data compression method disclosed in the Lei parent application) with the single data compression method that is the subject invention of the cited Lei patent.

Therefore, as Lei does not cure the deficiencies of Friederich as asserted by the Examiner, and as Friederich is inapplicable as a reference for the above-discussed reasons, Applicant

respectfully requests the Examiner's §103 rejection of claims 1, 3 and 6 be withdrawn. Because claims 19, 21 and 24 correspond generally to claims 1, 3 and 6 respectively albeit in method format, these claims are allowable for the same reasons as claims 1, 3 and 6. Further, as claims 4, 5, 7-12, 22, 23 and 25-30 depend from claims 1, 3, 6, 19, 21 and 24, respectively, they are allowable for the same reasons as amended claims 1, 3, 6, 19, 21 and 24.

Independent claims 13 and 16 recite that a data decompressing means decompresses a particular attribution record group when a search request for searching the database file is received, and a searching means searches a target record containing a search key in the particular attribution record group. The data decompressing means further decompresses the other attribution record groups when the searching means finds the target record. Therefore, the database managing apparatus need only initially search only the target record of the particular attribution record group, and can then decompress the other non-searched attribution records according to search results. Accordingly, total processing time for searching can be reduced.

Further, since independent claim 16 recites that the data compressing means compresses only the attribution record groups other than the particular attribution record group being searched, the present invention recited in claim 16, as well as claims 17 and 18 that depend therefrom, is allowable for the same general reasons as claim 6.

Therefore, as Friedrich neither teaches nor suggests the above-discussed features of the present invention recited in claims 13 and 16, for the above-discussed reasons, Applicant respectfully requests the Examiner's §103 rejection of claim 13, as well as claims 14 and 15 that depend therefrom, as well as claim 16, and claims 17 and 18 that depend therefrom, be withdrawn.

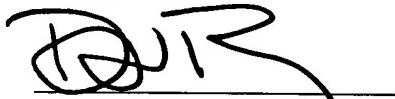
Claims 31-36 correspond generally to claims 13-18 albeit in method format. Therefore, these claims are allowable over Friedrich for essentially the same reasons discussed above regarding claims 13-18.

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Regarding claims 37-40, which were added in the previous Amendment filed on December 24, 2002, claims 37-38 depend from claim 3, and claims 39-40 depend from claim 21. These dependent claims are therefore allowable over Friedrich for at least the same reasons as their respective base claims.

In view of the above amendments and remarks, the present application is now believed to be in condition for allowance. A prompt notice to that effect is respectfully requested. A petition for a 3-month extension of time and a check for the requisite extension fee is enclosed. Please change any additional unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,



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